

FRANCIS WALKER TYPES OF, AND NEW SYNONYMIES
FOR, NORTH AMERICAN *HYDROPSYCHE* SPECIES
(TRICHOPTERA, HYDROPSYCHIDAE)*

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INTRODUCTION

Recently, while assembling the manuscript of a handbook to the Arctopsychidae and Hydropsychidae of Canada, I had occasion to examine the female holotypes of three species of *Hydropsyche* described from North America by Francis Walker (1852). Betten & Mosely (1940) record these types, but in line with the still all too prevalent practice regarding unassociated female Trichoptera, they did not illustrate the genitalia. If they had provided figures for these types the true identities of at least two North American species of *Hydropsyche* would have been long since established. The genital segments of these types are illustrated here for the first time.

Hydropsyche confusa (Walker)

Philopotamus confusus Walker, 1852: 103.

Hydropsyche confusa: Milne, 1936: 61; Betten & Mosely, 1940: 21.

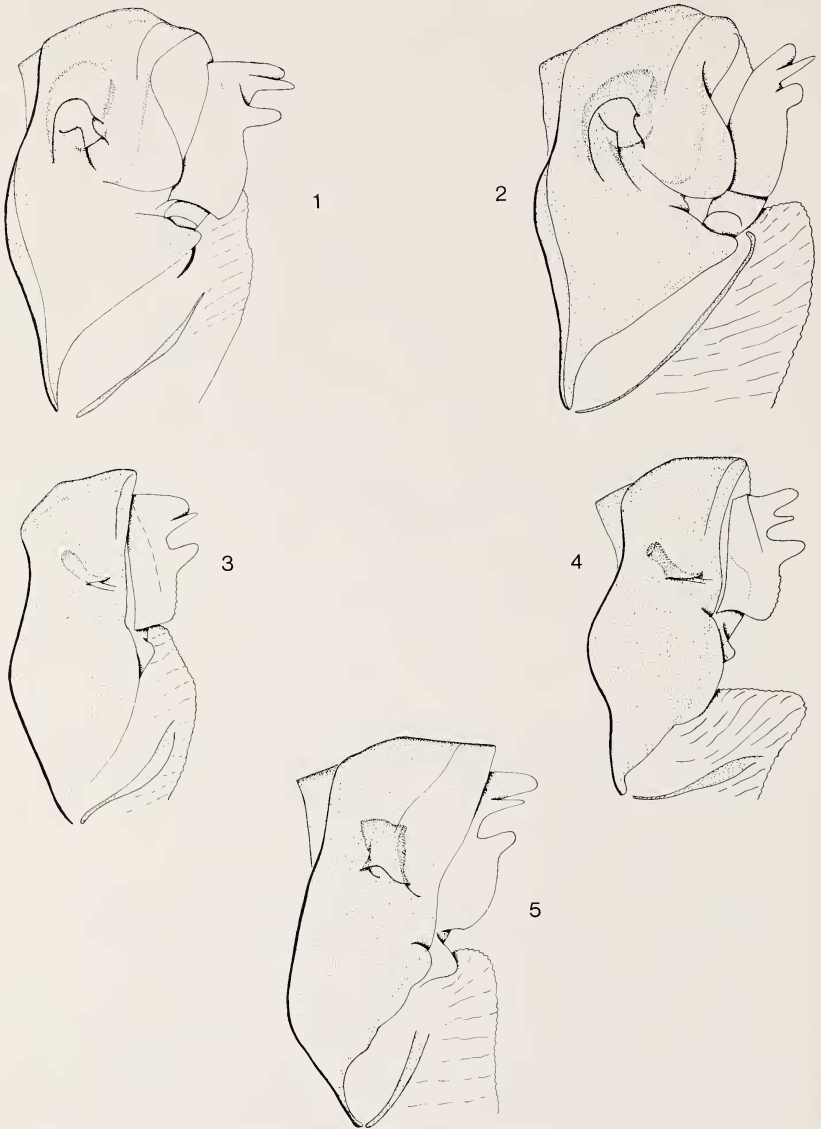
Hydropsyche separata Banks, 1936: 129; Ross & Spencer, 1952: 46
(as synonym of *H. guttata* Pictet); Smith, 1979: 10. NEW
SYNONYMY.

Hydropsyche guttata Pictet: Schuster & Etnier, 1978: 126.

Hydropsyche corbeti Nimmo, 1966: 688; Schuster & Etnier, 1978:
126 (as synonym of *H. guttata* Pictet). NEW SYNONYMY.

Fig. 2 depicts the genitalia of the female holotype of *H. confusa* (Walker). Fig. 1 is of the genitalia of a female which has been recognised as belonging to *H. separata* Banks. The rather obscure locality information recorded by Betten & Mosely (1940) indicates that the type of *confusa* was collected in the western Northwest Territories, adjacent to the northern boundary of Alberta. The female of *separata* was collected at Empress in southeastern Alberta.

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Figures 1-5. Fig. 1. *Hydropsyche separata* Banks [= *confusa* (Walker)]—genital segments of female, lateral aspect. Fig. 2. *H. confusa* (Walker)—genital segments of female holotype, lateral aspect. Fig. 3. *H. recurvata* Banks [= *alternans* (Walker)]—genital segments of female, lateral aspect. Fig. 4. *H. alternans* (Walker)—genital segments of female holotype, lateral aspect. Fig. 5. *H. reciproca* (Walker)—genital segments of female holotype, lateral aspect.

While not absolutely identical (the differences may be attributed to geographic variation, laboratory treatment, and observer variables), these two specimens are much more similar to each other than either is to the females of the most nearly related species (*H. betteni* Ross), and I judge them to be conspecific. *H. separata* is therefore synonymised with *H. confusa* which has clear priority.

Smith (1979) quotes me as considering the possibility that *H. corbeti* Nimmo may be a synonym of *separata*. Prior to my examination of the type of *confusa* I had decided that it was. However, it must now be entered as a synonym of *confusa*.

In view of the taxonomic history of this species Walker must be attributed with remarkable insight in naming it *confusa*.

Hydropsyche alternans (Walker)

Philopotamus alternans Walker, 1852: 104.

Hydropsyche alternans: Vorhies, 1909: 707 (sp.indet.); Betten, 1934: 185 (prob. *H. bifida*).

Philopotamus indecisus Walker, 1852: 104.

Hydropsyche indecisa: Betten & Mosely, 1940: 20 (as synonym of *H. alternans*).

Hydropsyche slossonae var. *recurvata* Banks, 1914: 253.

Hydropsyche recurvata: Betten, 1934: 190; Milne, 1936: 73 (as synonym of *H. slossonae*); Ross, 1944: 99. NEW SYNONYMY.

Symphitopsyche recurvata: Schuster & Etnier, 1978: 34.

Hydropsyche codona Betten, 1934: 187; Milne, 1936: 73 (as synonym of *H. slossonae*); Ross, 1938: 18 (as synonym of *H. recurvata*).

Fig. 4 depicts the genitalia of the holotype female of *H. alternans* (Walker) (from the Albany R., far northern Ontario). Fig. 3 depicts the genitalia of a female (from Wandering River, northeastern Alberta) which has been recognised as belonging to *H. recurvata* Banks. Again, these two females are not precisely identical, for possible reasons similar to those given under *H. confusa* above. I judge these two specimens to be conspecific. *H. recurvata* is therefore synonymised with *H. alternans* which has priority.

Hydropsyche reciproca (Walker)

Philopotamus reciprocus Walker, 1852: 104.

Hydropsyche reciproca: Betten & Mosely, 1940: 22.

The genitalia of the female holotype do not correspond to those of any other species known to me. They are illustrated here, for the first time, for the future reference of students of North American *Hydropsyche* species. The type locality is given simply as 'North America'.

SUMMARY

The female holotypes of *Hydropsyche confusa* (Walker), *H. alternans* (Walker), and *H. reciproca* (Walker), all from North America, were examined, and illustrations of the genitalia are provided for the first time. It is concluded that *H. separata* Banks is conspecific with *H. confusa* (Walker), and that *H. recurvata* Banks is conspecific with *H. alternans* (Walker). The Walker names have priority. *H. reciproca* (Walker) cannot yet be equated with any other known species.

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